

REMARKS/ARGUMENTS

Claims 1-4, 6-18, and 20-33 are pending in this Application.

Claims 1-4, 14-18, and 26-33 are currently amended. Applicants submit that support for the claim amendments can be found throughout the specification and the drawings.

Claims 1-4, 6-18, and 20-33 remain pending in the Application after entry of this Amendment. No new matter has been entered.

In the Office Action, claims 1-4, 6-18, and 20-33 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,035,306 to Lowenthal (hereinafter "Lowenthal").

Objections to the Specification

Applicants wish to thank the Examiner for this attention to detail. Applicants have corrected the specification as requested by the Examiner.

Objections to the Claims

Applicants respectfully request reconsideration and withdrawal of the objections to claims 15, 16, and 27 based on the amendments to these claims to correct informalities.

Claim Rejections Under 35 U.S. C. § 102(b)

Applicants respectfully traverse the rejections to claims 1-4, 6-18, and 20-23 and request reconsideration and withdrawal of the rejections under 35 U.S.C. § 102(b) based on Lowenthal.

Applicants respectfully note that to anticipate a pending claim, a prior art reference must provide, either expressly or inherently, each and every limitation of the pending claim. (M.P.E.P. § 2131).

The Office Action alleges that Lowenthal teaches or suggests all of the claim limitations of claims 1-4, 6-18, and 20-23. However, based on the arguments presented below, Applicants respectfully submit that Lowenthal fails to teach or suggest one or more of the claim limitations recited in each of claims 1-4, 6-18, and 20-23.

Claim 1

Amended claim 1 recites a computer-implemented method for diagnosing performance in a database, the method comprising:

receiving information indicative of a set of rules classifying operations performed in a database as one or more performance problems, each rule in the set of rules defining one or more symptoms and at least one root performance problem;

determining one or more values that quantify an impact for the one or more performance problem based on performance of operations in the database;

determining a first performance problem from the one or more performance problems based on a matching between the one or more values for the one or more performance problems and the one or more symptoms defined by at least one rule in the set of rules; and

generating information indicative of a recommendation for a solution for the first performance problem.

Applicants respectfully submit that Lowenthal fails to teach or suggest each and every claim limitation recited in amended claim 1.

Applicants respectfully submit that Lowenthal fails to teach or suggest the feature recited in amended claim 1 of “receiving information indicative of a set of rules classifying operations performed in a database as one or more performance problems, each rule in the set of rules defining one or more symptoms and at least one root performance problem.”

The Office Action alleges on page 7 that Lowenthal discloses the set of rules recited in claim 1 in Col. 5, lines 11-25. The Office Action states that the activity “hot spots” of Lowenthal are the rules that a DBA analyzes to pinpoint the operations that are causing the performance problems. Applicants respectfully disagree with the analysis of the Office Action. The activity “hot spots” of Lowenthal are substantially different from the set of rules recited in claim 1.

Lowenthal discloses that FIGS. 1 through 3 are diagrams showing placement of data in stripes and how such stripes can interfere to cause hot spots. The hot spots of Lowenthal are conditions in which strippers interfere with one another. FIG. 3 of Lowenthal clearly shows a situation “where several heavily used stripes overlap on isolated single drives to create several

hot spots shown by the black drive symbols.” (Lowenthal: Col. 5, lines 22-25). Thus, these activity “hot spots” of Lowenthal are locations on disks where stripes are heavily used to the point that “access requests will be queued” generating costly delays in servicing a request for a record. (Lowenthal: Col. 5, lines 20-21).

Applicants submit that the Office Action’s association of the activity “hot spots” with the set of rules recited in claim 1 cannot stand. Heavily used disk stripes causing activity “hot spots” in Lowenthal are substantially different from the set of rules recited in claim 1. Hot spots as in Lowenthal are situations where stripes are heavily used to the point that access requests will be queued. The Lowenthal hot spots are not rules as recited in claim 1. The rules recited in claim 1 classify classifying operations performed in a database as one or more performance problems.

Moreover, amended claim 1 recites receiving information indicative of the set of rules classifying operations performed in a database as one or more performance problems. The Office Action states that the overloaded disks indicate an activity “hot spot” that offers a clue to the DBA as to where the performance problems originate. However, the raw statistics information from overloaded disks in Lowenthal does not teach or suggest information indicative of a set of rules, but is merely the number or reads, writes, KB read, KB written, or average queue size. (Lowenthal: FIGS. 9-11). Additionally, the information when viewed by a DBA that allegedly offers a clue to the DBA as to where trouble is occurring does not teach or suggest that the viewed information of Lowenthal is information indicative of a set of rules classifying operations as being performance problems as recited in amended claim 1. The Office Action recognizes this by articulating that the DBA in Lowenthal identifies potential problems from viewing the data. Thus, in Lowenthal, the DBA “discovers” the problem from the data, and Lowenthal does not teach or suggest a set of rules pointing to a problem by classifying operations as being performance problems as recited in claim 1.

Furthermore, amended claim 1 recites that each rule in the set of rules defines one or more symptoms and at least one root performance problem. The activity “hot spots” in Lowenthal are conditions in which overloaded disks find themselves. The DBA in Lowenthal views statistics from the disks and stripes to see which stripes may be considered to be hot spots.

The raw statistics in Lowenthal are substantially different from the rules defining symptoms and problems as recited in amended claim 1. Additionally, the analyzed information viewed by the DBA that shows hot spots does not teach or suggest information indicative of rules where each rule in the set of rules defines one or more symptoms and at least one root problem as recited in amended claim 1 because the DBA in Lowenthal still has identify the problem from his experience. The information in Lowenthal viewed by the DBA may clue in the DBA to a problem, but the information in Lowenthal viewed by the DBA is not received as recited in amended claim 1 to include rules that define symptoms and at least one root performance problem.

Applicants further submit that Lowenthal fails to teach or suggest the feature recited in amended claim 1 of “determining a first performance problem from the one or more performance problems based on a matching between the one or more values for the one or more performance problems and the one or more symptoms defined by at least one rule in the set of rules.” The Office Action states that the DBA in Lowenthal attempts to pinpoint the operations that are causing the performance problems by correlating the sample I/O operations with the determined hot spot storage location. Applicants respectfully disagree.

The Office Action fails to see that the first performance problem recited in amended claim 1 is determined from the one or more performance problems classified by the set of rules. In contrast, in Lowenthal, the DBA attempts to manually discover the problem. This is substantially different from the process recited in claim 1 where potential performance problems are provided by a set of rules, and one of those performance problems is determined based on a matching between values and symptoms associated with a rule in the set of rules.

Furthermore, correlating between sample I/O operations and the storage location in Lowenthal as suggested in the Office Action does not teach or suggest matching between the one or more values for the one or more performance problems and symptoms of at least one rule in the set of rules as recited in claim 1. Matching operations to locations is different from matching values to rules that define root performance problems to determine a performance problem as recited in claim 1.

Accordingly, Applicants respectfully submit that Lowenthal fails to teach or suggest each and every claim limitation recited in amended claim 1. Thus, Applicants respectfully submit that amended claim 1 is allowable over the cited references.

Claims 2-4, 6-18, and 20-33

Applicants respectfully submit that independent claims 14, 26, and 29 are allowable for at least a similar rationale as discussed above for the allowability of claim 1, and others. Applicants respectfully submit that dependent claims 2-4 and 6-13, 15-18 and 20-25, 27-29, and 30-33 that depend directly and/or indirectly from the independent claims 1, 14, 26, and 29 respectively, are also allowable for at least a similar rationale as discussed above for the allowability of the independent claims. Applicants further respectfully submit that the dependent claims recite additional features that make the dependent claims allowable for additional reasons.

Unless otherwise specified, amendments to the claims are made for the purposes of clarity, and are not intended to alter the scope of the claims or limit any equivalents thereof.

While Applicants do not necessarily agree with the prior art rejections set forth in the Office Action, these amendments may be made to expedite issuance of the allowable subject matter. Applicants reserve the right to pursue claims to subject matter similar to those pending before the present Amendment in co-pending or subsequent applications.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 925-472-5000.

Respectfully submitted,

/Sean F. Parmenter/
Sean F. Parmenter
Reg. No. 53,437

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, Eighth Floor
San Francisco, California 94111-3834
Tel: 925-472-5000
Fax: 415-576-0300
SFP:lls
61275980 v1